Independent Statistics & Analysis U.S. Energy Information Administration	**FORM EIA-923 POWER PLANT OPERATIONS REPORT INSTRUCTIONS**	**OMB No. 1905-0129** **Approval Expires: 12/31/2016** **Burden: 2.3 Hours**

PURPOSE

Form EIA-923 collects information on the operation of electric power plants and combined heat and power (CHP) plants in the United States (see Required Respondents immediately below). Data collected on this form include electric power generation, fuel consumption, fossil fuel stocks, delivered fossil fuel cost, combustion byproducts, operational cooling water data, and operational data for NO_x, SO_2, particulate matter mercury and acid gas control equipment. These data are used to monitor the status and trends of the electric power industry and appear in many U.S. Energy Information Administration (EIA) publications and public databases.

REQUIRED RESPONDENTS

The Form EIA-923 is a mandatory report for all electric power plants and CHP plants that meet the following criteria: 1) have a total generator nameplate capacity (sum for generators at a single site) of 1 megawatt (MW) or greater; and 2) where the generator(s), or the facility in which the generator(s) resides, is connected to the local or regional electric power grid and has the ability to draw power from the grid or deliver power to the grid. To lessen the reporting burden, a sample of plants is collected on a monthly basis. Plants that are not selected to respond monthly must respond annually for the calendar year.

In addition to power plants, facilities that do not generate electricity but serve either as a transfer terminal or offsite storage facility for fossil fuel stocks for generating stations may be required to report on the Form EIA-923.

See instructions for each schedule for more specific filing requirements.

RESPONSE DUE DATE

Monthly respondents are required to file SCHEDULE 1 through SCHEDULE 4 and SCHEDULE 9 of this form with EIA by the last day of the month following the reporting period. For example, if reporting for July, survey data are due on August 31.

Supplemental respondents (monthly respondents' filings of Schedule 6 through Schedule 8) are required to file the form on or about March 31 following the end of the reporting year.

Annual respondents are required to file the form on or about the last day of February following the end of the reporting year. (Schedules 3A and 8D require monthly level data for the calendar year. All other schedules collect aggregated annual data for the calendar year.)

See instructions for each schedule for more specific filing requirements. NOTE Schedule 5 has been integrated into Schedule 3A to 3D.

METHODS OF FILING RESPONSE

Submit your data electronically using EIA's secure e-file system. This system uses security protocols to protect information against unauthorized access during transmission.

If you have not registered with the e-file Single Sign-On (SSO) system, send an email requesting assistance to: EIA-923@eia.gov.

If you have registered with SSO, log on at: https://signon.eia.gov/ssoserver/login

If you are having a technical problem with logging into or using the e-file system, contact the Help Desk at:

Email: EIASurveyHelpCenter@eia.gov, or Phone: 202-586-9595

If you need an alternate means of filing your response, contact the Help Desk. Retain a completed copy of this form for your files.

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CONTACTS

E-file System Questions: For questions related to the e-file system, see the help contact information immediately above.

Data Questions: For questions about the data requested on the Form EIA-923, contact:

Schedules 1 & 4:	Chris Cassar	christopher.cassar@eia.gov
Schedule 2:	Rebecca Peterson	rebecca.peterson@eia.gov
Schedules 3 & 5:	Ron Hankey	ronald.hankey@eia.gov
Schedules 6, 7, & 8:	Orhan Yildiz	orhan.yildiz@eia.gov
EIA-923 Fax:	202-287-1959 or 202-287-1960	
EIA-923 Mailbox:	EIA-923@eia.gov	

GENERAL INSTRUCTIONS

Revision Policy: Submit revisions to data previously reported as soon as possible after the error or omission is discovered. Do not wait to revise data until the next reporting month's form is due. Revisions or adjustments to data should be made only to the survey month(s) to which they pertain. (Do not adjust the current month to reflect a revision or adjustment to a prior month submission.)

- Log on to the e-file system, re-key revised data, indicate in SCHEDULE 9 the nature and date of the revision, and resubmit the data. If the e-file form is locked, contact EIA to request the form be opened for revision.

- Remember to save and RESUBMIT (click on the SUBMIT button). Resubmitting will allow the validation edits to re-validate the revised data element(s).

Alternatively , if the e-file system has been closed for the reporting period, please email your changes to EIA-923@eia.gov, and indicate 'Revision' in subject line. Be sure to include your Plant ID, the specific revision, and the month that is being revised.

Correcting prepopulated information: For e-file users, much of the information on the form is prepopulated by EIA. Verify the administrative information and make corrections to the contact name, phone numbers, addresses, or email addresses. Please note that PLANT NAME, PLANT CODE, and COMPANY NAME cannot be changed. Contact the survey manager if these items are incorrect.

Correcting errors: For e-file users, data that fail the interactive validation edits will be amassed into an edit log. Upon hitting the "Submit" button, the system will notify you if there are edits in the log. You will be directed to the log and given the opportunity to either revise the data in question or override it. When an edit is overridden, the system will ask for a comment/explanation. Each explanation is reviewed by EIA and, if it does not sufficiently explain the anomaly, you will be contacted for a more detailed clarification.

Revising data: If you report via facsimile or email, you may send a corrected copy of the form, but be sure to indicate in SCHEDULE 9: (1) that it is a revision, (2) the month that is being revised, (3) what has been revised, and (4) the date of the revision. If you report via the e-file system, send an email to the survey manager indicating the 4 items listed above.

Schedule 9 is provided for respondents to provide comments. Use it to explain anomalies with data or to provide any further details that are pertinent to the data and plant.

ITEM-BY-ITEM INSTRUCTIONS

SCHEDULE 1. IDENTIFICATION

1. **Survey Contact:** Verify contact name, title, address, telephone number, fax number, and email address.

2. **Supervisor of Contact Person for Survey:** Verify the contact's supervisor's name, title, address telephone number, Fax number and email address. The Survey Contact and Supervisor cannot be the same person.

If any of the above information is incorrect, revise the incorrect entry and provide the correct information. Provide any missing information.

3. **Report For:** Verify all information, including company name, plant name, plant identification number, plant State and county, and month or year for which data are being reported. State codes are two-character U.S. Postal Service abbreviations. These fields cannot be revised online. Contact the EIA-923 survey manager if corrections are needed.

4. **Regulatory Status:** Verify that the check correctly identifies your plant as either regulated or unregulated. Contact the EIA-923 survey manager if a correction is needed.

5. **CHP Checkbox:** Verify that the check correctly indicates whether or not this facility is a combined heat and power plant, regardless of its utility/nonutility status. Contact the EIA-923 survey manager if a correction is needed.

6. **CHP Plant Efficiency:** If the CHP checkbox is "YES", enter the efficiency of the combined heat and power plant. To calculate the total plant efficiency, divide the sum of the energy outputs (in British thermal units (Btu)), including net generation and useful thermal output by the sum of the energy inputs (fuels converted to Btu). Report the annual average total CHP plant efficiency.

SCHEDULE 2. COST AND QUALITY OF FUEL PURCHASES – PLANT-LEVEL

REQUIRED RESPONDENTS: Plants meeting the following criteria must report on Schedule 2.

1. The plant includes one or more generating units with a Primary Fuel of coal, natural gas, petroleum coke, distillate fuel oil, or residual fuel oil.
2. The total capacity with a Primary Fuel of coal is 50 megawatts (nameplate) or greater; or the total capacity with a Primary Fuel of any combination of natural gas, petroleum coke, distillate fuel oil, or residual fuel oil is 200 megawatts (nameplate) or greater.

All fuel purchases should be reported at the plant level.

Special Notes for Transfer Terminals and Storage Facilities:

- Fuel received at transfer terminals or storage facilities that CANNOT be allocated to individual plants or vendor information for cost and quality of the fuel at a terminal is not available to the plant, the terminal or storage facility must report the fuel purchases, including cost and quality data. Terminals and storage facilities must list the plants served on Schedule 4.

- In order to avoid duplicate data, report purchases at **either t**he storage site **or a**t the plant, but not both. Purchases reported by a storage site and then transferred to the plant should not be reported at the plant level. Instead, designate such transfers in Schedule 4 as a negative adjustment to stocks at the storage site and a positive adjustment to stocks at the plant, including appropriate comments.

ANNUAL RESPONDENTS: Report Schedule 2 by aggregating receipts for the entire year in the manner specified in the instructions for Schedule 2, Page 1 below.

Plant Name, Plant ID, State, Reporting Month and Year: For e-file users, verify the prepopulated information for these items at the top of this (and all) page(s).

If no fuel was purchased during the reporting period, place a check in the "No Receipts" box.

Indicate fuel received under tolling agreements with a "T" in the Contract Type or Tolling Agreement column. If the plant has a tolling agreement and the toller will not divulge the cost of the fuel, you may leave both the commodity and delivered prices blank. Report all other data.

SCHEDULE 2. A. CONTRACT INFORMATION, PURCHASES, AND COSTS.

1. **Fuel Supplier Name:**

Coal Purchases: Report data by supplier and mine source. Purchased coal or petroleum coke which will be converted to synthesis gas at an IGCC plant should be reported as it is received, i.e. as coal or petroleum coke.

Monthly Respondents**:** Coal received from spot-market purchases and from contract purchases must be reported separately. Data on coal received under each purchase order or contract from the same supplier must be reported separately. Coal purchases may be aggregated only if the supplier, purchase type, contract date, coal rank, transportation mode, costs, fuel quality, and all mine information are identical. If coal received under a purchase order or contract originates in more than one State/county/mine and the mines are known as well as the amount received from each mine, split the amount received accordingly between the number of different mines and report identical quality and prices (unless the actual quality and prices are known). Mine information is reported on Schedule 2C. If the mine or group of mines is not available on the list of mines provided for data entry on the e-filing system, contact EIA immediately (see contacts on Page 1 of the form or instructions). EIA will add appropriate choices for purchases from multiple sources to the drop down list.

Annual Respondents**:** Coal received from spot market purchases and from contract purchases must be reported separately. Aggregation of coal shipments is allowed Only if shipments are identical in purchase type, coal rank, mine name, mine type, Mine Safety and Health Administration (MSHA) ID, State of origin, county of origin, and supplier. For aggregated purchases, report the weighted average cost and quality of the fuel. If the mine or group of mines is not available on the list of mines provided for data entry on the e-filing system, contact EIA immediately (see contacts on Page 1 of the form or instructions).

Petroleum Product Purchases: Report data by fuel type, supplier or broker, or refinery and, if applicable, port of entry. Report purchases of residual fuel oil, distillate fuel oil and petroleum coke.

- **Do not report** waste oil, kerosene, jet fuel, propane or other petroleum products.

Monthly Respondents: Oil received from spot-market purchases and from contract purchases must be reported separately. Report individual shipments as separate line items.

Annual Respondents: Oil received from spot-market purchases and from contract purchases must be reported separately. Aggregation for the entire year is allowed by fuel type, purchase type and supplier. If aggregated, report the weighted average cost and quality of the fuel.

Natural Gas Purchases (monthly and annual respondents): Report natural gas purchases by supplier. Aggregation of gas deliveries from various suppliers is allowed only if 1) the deliveries are spot purchases and 2) the transportation and supply contracts are identical (either firm or interruptible). If aggregated, report the weighted average fuel cost and quality. Contract purchases must be reported as separate line items and should never be aggregated.

Do not report:

- Other gases such as manufactured gas (coke oven, refinery, or blast furnace gas) propane, landfill gas or other miscellaneous gaseous fuels.
- Do not report natural gas injected into storage. Report stored gas when it is received at the plant. Do not report costs associated with storage.

2. **Contract Type or Tolling Agreement:** Use the following codes for **coal, petroleum** and **natural gas** purchases:

C – Contract Purchase – Fuel received under a purchase order or contract with a term of **one year or longer**. Contracts with a shorter term are considered spot purchases. (See below.)

NC – New Contract or Renegotiated Contract Purchase – Fuel received under a purchase order or contract with duration of one year or longer, under which deliveries were first made during the reporting month.

S – Spot-Market Purchase – Fuel received under a purchase order or contract with duration of **less than one year.**

T – **Tolling Agreement** – Fuel received under a tolling agreement (bartering arrangement of fuel for generation).

3. **Contract Expiration Date:** Enter the month and the year the purchase order or contract expires. For example, report "1112" for a November "2012" expiration date. This column should be left blank if **Contract Type** contains an "S" for spot-market purchase or a "T" for tolling agreement.

Purchases

4. **Energy Source:** Identify purchased fossil fuels using the energy source codes listed in Table 8 for

coal, petroleum products, petroleum coke, and natural gas.

5. **Units of Measure:**

   a. **Coal and petroleum coke: short tons on an as-received basis.**

   b. **Petroleum products: barrels.**

   c. **Natural gas: thousands of cubic feet.**

6. **Quantity Received:** Fuel purchases reported should pertain to the fuel that will ultimately be used only in the electric power plant for the generation of electricity and at combined heat and power plants for useful thermal output (process steam, district heating/cooling, space heating, or steam delivered to other end users). As far as possible, do not include fuel that will be used in boilers with no connection to an electric power generator and are not part of the electric power station or fuel purchased for use in other equipment. If these fuels cannot be separated, please provide a comment on Schedule 9, Comments. Start-up and flame-stabilization fuels should be reported. When fuel is purchased by and received at the plant and is resold, report the total receipts minus the amount sold. See the below instruction regarding how to report the costs.

Cost of Fuel

7. **Total Delivered Cost (all fuels):** Enter the delivered cost of the fuel in cents per million Btu to the nearest 0.1 cent. This cost should include all costs incurred in the purchase and delivery of the fuel to the plant. Maintenance and depreciation costs of coal delivered in railcars owned by the plant should be included. Unloading costs should not be included. Do not include adjustments associated with prior months' fuel costs. The delivered price for fuel shipped under contract should include any penalties/premiums paid or expected to be paid on the fuel delivered during the month. These adjustments should be made only by revising the appropriate prior months' submissions**.** The current month fuel costs should reflect only costs associated with the current month fuel deliveries. If fuel received at the plant is resold, report the commodity cost and the total delivered cost as the average cents per MMBtu paid for the original receipt. Do not discount the costs by the revenue received for the sale of the fuel.

8. For natural gas, include the following pipeline charges: fuel losses, transportation reservation charges, balancing costs, and distribution system costs outside of the plant. Because these types of fees can skew the cost of the fuel per MMBtu, please provide an explanation in an edit log override comment, e.g. "This price includes a reservation fee of **x** dollars."

9. **Commodity Cost (Coal, Petroleum Coke, and Natural Gas Only):** The commodity cost is the price of that fuel (in cents per million Btu) at the point of first loading (free on board mine or transportation pipeline (FOB)) including taxes and quality-related charges or credits. The commodity cost does not include: loading and unloading charges, dust proofing, freeze conditioning, switching charges, diesel fuel surcharges, pipeline charges, transportation charges or any other charges relating to the movement of the fuel to the point of use. In the case of natural gas this is typically the price of the gas FOB the transmission pipeline. For coal, the commodity cost is FOB mine.

10. For fuel purchased via a hedging contract, report the actual fuel supplier, not the hedge contract. Report the cost net of gains/losses as a result of the contract.

11. For plants that receive natural gas, report the name of the distribution pipeline(s) and/or the major interstate gas pipeline(s) providing delivery of the natural gas.

SCHEDULE 2. B. QUALITY OF FUEL AND TRANSPORTATION INFORMATION

Quality of Fuel

Fuel Supplier Name, Contract Type, Quantity Purchased, and Energy Source is prepopulated for e-file users based on the data entered on page 1 of SCHEDULE 2.

1. **Heat Content:** Enter the actual (not contractual) average Btu content (higher heating value) for each fuel purchase in terms of million (MMBtu) per ton for solid fuel, MMBtu per barrel for liquid fuel, and MMBtu per thousand cubic feet for gas. Show to the nearest 0.001 MMBtu. Refer to Table 8 for approximate ranges.

2. **Sulfur Content:** For all coal types, petroleum coke, and residual fuel oil enter the sulfur content of the fuel in terms of percent sulfur by weight. Show to the nearest 0.01 percent. Refer to Table 1 for approximate ranges.

3. **Ash Content:** For coal and petroleum coke, enter the ash content of the fuel in terms of percent ash by weight. Show to the nearest 0.1 percent. Enter a comment in Schedule 9 if the reported ash content for coal is an estimate. Refer to Table 1 for approximate ranges.

4. **Mercury Content:** For coal only, enter the mercury content in parts per million (ppm). Show to the nearest 0.001 parts per million (ppm). If lab tests of the coal receipts do not include the mercury content, enter the amount specified in the contract with the supplier. Refer to Table 1 for approximate ranges. If mercury content is unknown, enter 999.

5. **Chlorine Content:** For coal only, enter the chlorine content in parts per million (ppm). Show to the nearest 0.001 ppm. If lab tests of the coal do not include the chlorine content, enter the amount specified in the contract with the supplier. If unknown , enter 999.

Table 1

Fuel	% Sulfur	% Ash	Mercury (ppm)
BIT	0.4 – 6.0	4.0 – 30.0	0.020 -- 0.500
LIG	0.4 – 3.0	5.0 – 35.0	0.020 -- 0.500
SUB	0.2 – 1.5	3.0 – 15.0	0.020 -- 0.200
ANT	0.4 – 6.0	4.0 – 30.0	0.020 -- 0.500
RC	0.2 – 6.0	3.0 – 30.0	0.020 -- 0.500
WC	0.3 – 6.0	5.0 – 50.0	0.020 -- 1.200
PC	1.0 – 7.0	0.1 -- 1.2	
RFO	0.2 – 4.5		

Fuel Transportation

5. **Natural Gas:** Use the following codes for natural gas transportation service and supply purchase type:

   F – Firm – Gas transportation service or supply contract provided on a firm basis, i.e. the contract with the gas transportation company anticipates no interruption of gas transportation or supply service. Firm transportation service takes priority over interruptible service.

   I – Interruptible – Gas transportation service or supply provided under schedules or contracts which anticipate and permit interruption on short notice, such as in peak-load seasons, by reason of the

claim of firm service customers and higher priority users.

(Note: Natural Gas received under firm contracts must be reported separately from interruptible contracts.)

6. **Predominant Mode:** The method used to transport the fuel **over the longest distance** from point of origin to consumer. Point of origin is the mine for coal deliveries. If purchased from a broker or a fuel terminal and the original mode of transportation is unknown to the purchaser, provide a reasonable assumption for the longest distance from the coal mine (for example, coal moved from western to eastern States is most likely transported predominately by rail). If the shipment involves only one mode of transportation, that is the Predominant Mode. If the shipment involves more than one mode of transportation, see Secondary Mode below.

7. **Secondary Mode:** If more than one method of transportation is used in a single shipment, the Secondary Mode of transportation is the **second longest distance** used to transport the fuel to consumer. If more than two methods are used in a single shipment, only the Predominant and Secondary Modes should be reported.

   Do not report "truck" as a transportation mode if trucks are used to transport coal exclusively on private roads between the mine and rail load-out or barge terminal.

   Do not report the transportation modes used entirely within a mine, terminal, or power plant (e.g., trucks used to move coal from a mine pit to the mine load-out; conveyors at a power plant used to move coal from the plant storage pile to the plant).

   For mine-mouth coal plants, report "Conveyor" as the Predominant Mode if the conveyor feeding coal to the plant site originates at the mine. Otherwise report the Predominant Mode (typically truck or rail) used to move the coal to the plant site.

Report Transportation Modes using the following codes:

RR – Rail: Shipments of fuel moved to consumers by rail (private or public/commercial). Included is coal hauled to or away from a railroad siding by truck if the truck did not use public roads.

RV – River: Shipments of fuel moved to consumers via river by barge. Not included are shipments to Great Lakes coal loading docks, tidewater piers, or coastal ports.

GL – Great Lakes: Shipments of coal moved to consumers via the Great Lakes. These shipments are moved via the Great Lakes coal loading docks, which are identified by name and location as follows:

Conneaut Coal Storage & Transfer, Conneaut, Ohio
NS Coal Dock (Ashtabula Coal Dock), Ashtabula, Ohio
Sandusky Coal Pier, Sandusky, Ohio
Toledo Docks, Toledo, Ohio
KCBX Terminals Inc., Chicago, Illinois
Superior Midwest Energy Terminal, Superior, Wisconsin

TP – Tidewater Piers and Coastal Ports: Shipments of coal moved to Tidewater Piers and Coastal Ports for further shipments to consumers via coastal water or ocean. The Tidewater Piers and Coastal Ports are identified by name and location as follows:

Dominion Terminal Associates, Newport News, Virginia
McDuffie Coal Terminal, Mobile, Alabama
IC Railmarine Terminal, Convent, Louisiana
International Marine Terminals, Myrtle Grove, Louisiana
Cooper/T. Smith Stevedoring Co. Inc., Darrow, Louisiana
Seward Terminal Inc., Seward, Alaska
Los Angeles Export Terminal, Inc., Los Angeles, California
Levin-Richmond Terminal Corp., Richmond, California
Baltimore Terminal, Baltimore, Maryland

Norfolk Southern Lamberts Point P-6, Norfolk, Virginia
Chesapeake Bay Piers, Baltimore, Maryland
Pier IX Terminal Company, Newport News, Virginia
Electro-Coal Transport Corp., Davant, Louisiana

WT – Water: Shipments of fuel moved to consumers by other waterways.

TR – Truck: Shipments of fuel moved to consumers by truck. Not included is fuel hauled to or away from a railroad siding by truck on non-public roads.

TC – Tramway/Conveyor: Shipments of fuel moved to consumers by tramway or conveyor.

SP – Slurry Pipeline: Shipments of coal moved to consumers by slurry pipeline.

PL – Pipeline: Shipments of fuel moved to consumers by pipeline.

SCHEDULE 2. C. COAL MINE INFORMATION

Fuel Supplier Name, Contract Type, Quantity Purchased, and Energy Source is prepopulated for e-file users based on the data entered on page 1 of SCHEDULE 2.

1. **State or Country of Origin**: Choose the two-letter U.S. Postal Service abbreviation or country code from the drop down list of coal producing states (countries). For imported coal, insert the two-letter country code shown here.

   AS – Australia; **CN** – Canada; **CL** – Colombia; **IS** – Indonesia; **PL** – Poland;
   RS – Russia; **VZ** – Venezuela; **OT** – Other (specify the country in Schedule 9).

   The State of Origin is mandatory. If purchases originate from a broker, barge site or other third party, you must contact the broker, barge site or other party and find out the State(s) where the coal originates. If the broker or supplier is not forthcoming with State of Origin information or Mine Information, provide the name and telephone number of the supplier on Schedule 9, Comments.

   If coal purchased under a purchase order or contract originates in more than one State, determine from the supplier the most dominant or probable State(s) of origin for the coal. Contact EIA to have the supplier and State(s) added to the drop down list of choices for State of Origin and Mine Information on Schedule 2 Page 3. If the amount of coal from each State/Mine is known, allocate the purchase among multiple States, or report the State where the majority of the coal originates and report identical quality and cost data (unless the actual quality and costs are known).

   Contact EIA immediately (see contacts on Page 1 of the form or instructions) for assistance in reporting coal State of Origin or Mine Information. EIA will add appropriate choices for purchases from multiple sources to the drop down list.

2. **Mine Information**: Choose from the drop down list the mine of origin. The list will display only those mines located in the State/country of origin. The displayed information includes the mine operating company for informational purposes to aid in identifying the mine of origin. Upon choosing a mine, the MSHA ID, Mine Name, Mine Type and Mine County will automatically be populated.

   Mine Information is mandatory. If coal purchased under a purchase order or contract originates in more than one State, determine from the supplier the most dominant or probable mine(s) of origin for the coal. List the mines on Schedule 9, Comments. If the broker or supplier is not forthcoming with State of Origin information or Mine Information, provide the name and telephone number of the supplier on Schedule 9, Comments.

   In cases where coal originates from multiple mines or the specific mine information cannot be

determined, list the tipple/loading point or dock on Schedule 9, Comments. EIA will add appropriate choices to the drop down list of Mine Information to accommodate multiple mines or undetermined mine sources. Use Schedule 9, Comments, to provide detailed explanations of mine origin data, including names of multiple mines for a specific supplier/broker or dock, or the most probable origin of the coal (county/State) if not specifically known.

Contact EIA immediately (see contacts on Page 1 of the form or instructions) for assistance in reporting coal State of Origin or Mine Information. EIA will add appropriate choices for purchases from multiple sources to the drop down list.

SCHEDULE 3. PART A. BOILER AND GENERATOR INFORMATION FOR STEAM-ELECTRIC COMBUSTIBLE-FUELED PLANTS

FUEL CONSUMPTION AND GENERATION

Required Respondents: Plants with steam turbines and burn organic fuels are required to report fuel consumption for each boiler and electric power generation for each generator associated with the boiler(s). Excluded are steam turbines where the energy source is nuclear, geothermal, solar, or use purchased steam or waste heat exclusively.

Report the data in groups of associated boilers and generators. Most of these groupings are preprinted on the form according to the information provided on boiler/generator associations reported on Schedule 6A of the Form EIA-860, Annual Electric Generator Report. Please contact EIA for corrections to these groupings or to add new boiler or generator IDs.

Do not leave fields blank. If no fuel was consumed and/or no electric power generated, enter zeros.

For plants that report annually, Schedules 3A must be reported for each month.

Prime movers are devices that convert one energy form (such as heat from fuels or the motion of water or wind) into mechanical energy. Examples include steam turbines, combustion turbines, reciprocating engines, and water turbines. For a complete list of prime mover codes, please refer to Table 7.

Prime Mover Code: Prime mover codes are shown in Table 7. Only ST is used in Schedule 3. Part A. For e-file users, the code is prepopulated.

Boiler ID: Most boiler IDs are prepopulated (Boiler IDs are taken from the latest reported EIA-860, Annual Electric Generator Report). If a new boiler ID needs to be added to Schedule 3A, choose the ID from the drop down list. If it is not on the list, contact EIA to have it added. Boiler IDs must match those reported on the Form EIA-860.

Energy Source: Use the fuel codes in Table 8. For blended coal products, an estimated allocation for each coal rank is preferable, if it can be determined. Alternatively, report the blended quantity under energy source code "CBL" for Coal –Blended. An estimated allocation between coal ranks is acceptable. For energy source codes OTH, OBS, OBG, OBL and OG, specify the fuel in the area at the bottom of the page.

Quantity Consumed: For each month, report the amount of fuel consumed for electric power generation and, at combined heat and power stations, for useful thermal output.

Type of Physical Units: Fuel consumption must be reported in the following units: Solids in Tons; Liquids in Barrels (one barrel equals 42 U.S. gallons); and Gases in Thousands of cubic feet (Mcf).

Average Heat Content: For each month, report the heat content of the fuels burned to the nearest 0.001 million Btu (MMBtu) per physical unit. The heat content of the fuel should be reported as the gross or "higher heating value" (rather than the net or lower heating value). The higher heating value exceeds the lower heating value by the latent heat of vaporization of the water. The heating value of fuels generally used and reported in a fuel analysis, unless otherwise specified, is the higher heating value. If the fuel heat content cannot be reported "as burned," data may be obtained from the fuel supplier on an "as received" basis. If this is the case, indicate on SCHEDULE 9 that the fuel heat content data are "as received." Report the value in the following units: solids in million Btu (MMBtu) per ton; liquids in MMBtu per barrel; and gases in MMBtu per thousand cubic feet (Mcf). Refer to Table 8 for approximate ranges of heat content of specific energy sources.

Sulfur Content (petroleum, petroleum coke, and coal): For each month, enter sulfur content to nearest 0.01 percent by weight. Sulfur content should be reported for the following fuel codes: ANT, BIT, LIG, RC, SUB, WC, CBL, PC, RFO, and WO. Refer to Table 1 for approximate ranges.

Ash Content (coal and petroleum coke only): For each month, enter ash content to the nearest 0.1 percent. Ash content should be reported for the following fuel codes: ANT, BIT, LIG, SUB, WC, CBL, RC, and PC. Refer to Table 1 for approximate ranges.

Report actual values. If necessary, report estimated values and state that the value is an estimate on SCHEDULE 9.

ENTER ZERO when an energy source was not consumed for the reporting period or, if using the e-file system, delete the unused line. Do not leave blank.

Generator ID: Most generator IDs are prepopulated and grouped with the associated boilers. For an ID not prepopulated, choose the ID from the drop down list of generator IDs that were reported for your plant on the Form EIA-860. If the generator ID is not on the list, contact EIA to have the ID added to your form. Generator IDs must match those reported on the Form EIA-860.

Data must be reported in megawatthours (MWh), rounded to whole numbers, no decimals.

If no generation occurred, report **ZERO**. Please do not leave fields blank.

Gross Generation: Enter the total amount of electric energy produced by generating units and measured at the generating terminal. For each month, enter that amount in MWh.

Net Generation: Enter the net generation (gross generation minus the parasitic station load, i.e. station use). If the monthly station service load exceeded the monthly gross electrical generation, report negative net generation with a minus sign, not parentheses. For each month, enter that amount in MWh. Combined heat and power plants in the industrial and commercial sectors may choose to leave net generation blank in cases where net generation cannot be determined. Please note that net generation is not defined as electric power sold to the grid (net of direct use), but as gross minus station use. If station use is not separable from direct use at combined heat and power plants, report only gross generation and leave net generation blank.

SCHEDULE 3. PART B.

FUEL AND GENERATION INFORMATION FOR SINGLE CYCLE GAS TURBINES, INTERNAL COMBUSTION ENGINES, HYDROELECTRIC PUMPED STORAGE, OTHER ENERGY STORAGE TECHNOLOGIES AND FUEL CELLS

Required Respondents: Plants with single cycle gas turbines, internal combustion engines, fuel cells, and electric power input to pumped-storage hydroelectric plants, compressed air units, other energy storage technologies, or other miscellaneous prime mover types must report the energy consumption and electric generation on Schedule 3B. Excluded from this schedule are conventional hydroelectric plants and all other

plants that are not required to report energy consumed (e.g., wind, solar, geothermal, and nuclear). Do not report for each individual unit. For example, report natural gas consumed and megawatthours produced for all single cycle gas turbines (GT) at the plant as one value.

Report the fuel consumption and generation output for each prime mover type as a group (side by side) on Schedule 3.B. Report one value for each fuel type consumed by prime mover type. Report ONLY ONE value for generation per prime mover type.

Energy Storage Technologies, including pumped storage hydroelectric, compressed air, batteries, or other storage technologies report the energy consumed for storage (pumping energy, etc.) in megawatthours. Report the net generation as the difference between the gross generation and the energy consumed for storage. The net generation may be negative whenever the energy consumed for storage exceeds the net generation.

Prime movers are devices that convert one energy form (such as heat from fuels or the motion of water or wind) into mechanical energy. Examples include steam turbines, combustion turbines, reciprocating engines, and water turbines.

For combined heat and power plants, if steam was produced for purposes other than electric power generation during this reporting period, please place a check in the box on the form.

Prime Mover Code: Prime mover codes are shown in Table 7. Report for codes BA, CE, FC, GT, IC, PS, and OT in Schedule 3. Part B. For e-file users, the code is prepopulated. If the prepopulated code is incorrect, choose the correct code from the drop-down list.

Report actual values. If necessary, report estimated values and state that the value is an estimate on SCHEDULE 9.

Energy Source: Use the fuel codes in Table 8. For energy source codes OTH, OBS, OBG, OBL and OG, specify the fuel in the area at the bottom of the page.

Quantity Consumed: For each prime mover type, report the amount of fuel consumed for electric power generation and, at combined heat and power stations, for useful thermal output. Include start-up and flame-stabilization fuels. Energy Storage technologies report the energy consumed for pumping water, compressing air, or energy storage in megawatthours.

Type of Physical Units: Fuel consumption must be reported in the following units:
Solids – Tons
Liquids – Barrels (one barrel equals 42 U.S. gallons)
Gases – Thousands of cubic feet (Mcf)
Energy Storage -- Megawatthours

Average Heat Content: For each month, report the heat content of the fuels burned to the nearest .001 MMBtu (million Btu) per physical unit (MMBtu per ton/barrel/thousand cubic feet). The heat content of the fuel should be reported as the gross or "higher heating value" (rather than the net or lower heating value). The higher heating value exceeds the lower heating value by the latent heat of vaporization of the water. The heating value of fuels generally used and reported in a fuel analysis, unless otherwise specified, is the higher heating value. If the fuel heat content cannot be reported "as burned," data may be obtained from the fuel supplier on an "as received" basis. If this is the case, indicate on SCHEDULE 9 that the fuel heat content data are "as received." Report the value in the following units: solids in MMBtu per ton; liquids in MMBtu per barrel; and gases in MMBtu per thousand cubic feet (Mcf). Refer to Table 8 for approximate ranges of heat content for specific fuels. Heat content can be blank if fuel consumed is zero and for pumped storage and compressed air plants.

Peaking Unit (Yes/No): Indicate with a Y or N if the unit(s) can be described as a peaking unit as opposed to a base load unit. Peaking units typically run only during hours of high demand (or peak demand) as opposed to base load units that run continuously except for maintenance or other outages.

Report the net and gross generation for each prime mover type as one value.

Gross Generation: Enter the total amount of electric energy produced by generating units and measured at the generating terminal. For each month, enter in the MWh generated.

Net Generation: Enter the net generation (gross generation minus the parasitic station load, i.e. station use). If the monthly station service load exceeded the monthly gross electrical generation, report negative net generation with a minus sign. Do not use parentheses. For each month, enter that amount in MWh. Combined heat and power plants in the industrial and commercial sectors may choose to leave net generation blank in cases where net generation cannot be determined. Please note that net generation is not defined as electric power sold to the grid (net of direct use), but as gross minus station use. If station use is not separable from direct use at combined heat and power plants, report only gross generation and leave net generation blank.

Data must be reported in MWh, rounded to whole numbers, with no decimals.

SCHEDULE 3. PART C.

FUEL AND GENERATION INFORMATION FOR COMBINED CYCLE AND IGCC PLANTS

FUEL CONSUMPTION AND GENERATION

Report combined cycle units in groups of associated combustion turbines, HRSGs and steam turbines. These are preprinted on the e-file form. If incorrect, please contact EIA for corrections.

Report fuel consumed in EACH combustion turbine and EACH HRSG. Report generation for EACH combustion turbine and EACH steam turbine.

If multiple fuels are consumed in the combustion turbine or HRSG, report for consumption each fuel type, but generation may be one value for the unit.

In a separate section, IGCC plants report the fuel input to the gasifier, coal or petroleum coke and the associated heat, sulfur and ash contents.

Energy Source: Use the fuel codes in Table 8. For energy source codes OTH, OBS, OBG, OBL and OG, specify the fuel in the area at the bottom of the page. IGCC plants should report the synthesis gas consumed in each combustion turbine and the heat input to the HRSG units (WH).

Quantity Consumed: For each combustion turbine or HRSG, report the amount of fuel consumed for electric power generation and, at combined heat and power stations, for useful thermal output. IGCC units should report the synthesis gas consumed. Non-supplementary fired steam turbines should report Waste Heat as the energy source. Quantity may be left blank for waste heat.

Type of Physical Units: Fuel consumption must be reported in the following units:
Solids – Tons
Liquids – Barrels (one barrel equals 42 U.S. gallons)
Gases – Thousands of cubic feet (Mcf)
Energy Storage -- Megawatthours

Average Heat Content: For each month, report the heat content of the fuels burned to the nearest .001 MMBtu (million Btu) per physical unit (MMBtu per ton/barrel/thousand cubic feet). The heat content of the fuel should be reported as the gross or “higher heating value” (rather than the net or lower heating value). The higher heating value exceeds the lower heating value by the latent heat of vaporization of the water. The heating value of fuels generally used and reported in a fuel analysis, unless otherwise specified,

is the higher heating value. If the fuel heat content cannot be reported "as burned," data may be obtained from the fuel supplier on an "as received" basis. If this is the case, indicate on SCHEDULE 9 that the fuel heat content data are "as received." Report the value in the following units: solids in MMBtu per ton; liquids in MMBtu per barrel; and gases in MMBtu per thousand cubic feet (Mcf). Refer to Table 8 for approximate ranges of heat content for specific fuels. Heat content can be blank if fuel consumed is zero

Gross Generation: Enter the total amount of electric energy produced by generating units and measured at the generating terminal. For each month, enter in the MWh generated.

Net Generation: Enter the net generation (gross generation minus the parasitic station load, i.e. station use). If the monthly station service load exceeded the monthly gross electrical generation, report negative net generation with a minus sign. Do not use parentheses. For each month, enter that amount in MWh. Combined heat and power plants in the industrial and commercial sectors may choose to leave net generation blank in cases where net generation cannot be determined. Please note that net generation is not defined as electric power sold to the grid (net of direct use), but as gross minus station use. If station use is not separable from direct use at combined heat and power plants, report only gross generation and leave net generation blank.

Data must be reported in MWh, rounded to whole numbers, with no decimals.

IGCC Plants – Supplemental Fuel Data for Gasifier Unit: Report the fuel input to the gasifier unit (coal or petroleum coke) along with the average heat, sulfur, and ash contents.

SCHEDULE 3. PART D.

GENERATION FROM NUCLEAR, NONCOMBUSTIBLE AND RENEWABLE ENERGY SOURCES

Required Respondents: This schedule will be completed by all nuclear plants and by all wind, solar, geothermal, conventional hydroelectric or other plants where the energy source is not required to be reported on Schedules 3A, 3B or 3C, such as purchased steam or waste heat. No fuel consumption data is required for these types of plants. Report generation by energy source for nuclear, wind, solar, geothermal, conventional hydroelectric and miscellaneous sources such as purchased steam or waste heat. Report nuclear data by generating unit. For all other plant types, ignore the unit column.

Prime Mover Code: Prime mover codes are shown in Table 7. Only HY, HA, HB, HK, BT, PV, ST, WT, WS and OT can be used in Schedule 3.D. For e-file users, the code is prepopulated. If the prepopulated code is incorrect, choose the correct prime mover code from the drop-down list.

Energy Source: Enter one of the fuel codes listed in Table 8. Valid entries are NUC, WAT, WND, GEO, PUR, WH, SUN or OTH.

Unit Code: The nuclear unit code is prepopulated. Contact EIA if it is incorrect. All other plants ignore this field. If no generation occurred, report zero. Do not leave fields blank.

Data must be reported in MWh, rounded to whole numbers, with no decimals.

Gross Generation: Enter the total amount of electric energy produced by generating units and measured at the generating terminal. For each month, enter that amount in MWh.

Net Generation: Enter the net generation (gross generation minus the parasitic station load, i.e. station use). If the monthly station service load exceeded the monthly gross electrical generation, report negative net generation with a minus sign. Do not use parentheses. For each month, enter that amount in MWh. Combined heat and power plants in the industrial and commercial sectors may choose to leave net generation blank in cases where net generation cannot be determined. Please note that net generation is not defined as electric power sold to the grid (net of direct use), but as gross minus station use. If station use is not separable from direct use at combined heat and power plants, report only gross generation and leave net generation blank.

SCHEDULE 4. FOSSIL FUEL STOCKS AT THE END OF THE REPORTING PERIOD AND DATA BALANCE

Required Respondents: Stocks at plants that utilize coal, petroleum products and petroleum coke must report the stocks of these fuels. Plants which report on Schedule 2 (Fuel Purchases) and utilize natural gas must report an adjustment whenever the amount of gas consumed does not equal the amount received as reported on Schedule 2. **If Schedule 2 is not required or the fuel is not required on Schedule 2, no balancing or adjustment to the stocks is required.**

For Fuel Terminals: Report stocks held at terminals that will be distributed to the power plants served and reported on this schedule. Report shipments out of the terminal as negative adjustments. Provide the plants and quantity of fuels moved to EACH plant on Schedule 4 (at bottom of form).

Report fuel stocks ONLY for the following fuels:

- Coal: Report all stocks of coal for use by this power plant. Include both stocks held on site and stocks held off site whether owned by your plant or by an affiliated company. If the stocks are held for the plant by an affiliated company and the amount is unknown, please provide EIA the name of the company. EIA will contact them to obtain the stocks number. Do not report waste coal stocks.
- Residual oil (No. 5 and No. 6 fuel oils)
- Distillate-type oils (including diesel oil, No. 2 oil, jet fuel, and kerosene)
- Petroleum coke

Include back-up fuels and start-up and flame-stabilization fuels. Do not report stocks for waste coal, natural gas, or wood and wood waste or other biomass fuels. All fuel stocks should be reported at the plant level where possible. Stocks data should be reported by a transfer terminal or storage facility only if inventory cannot be attributed to individual plants.

To avoid duplication, do not report receipts in Schedule 2 at the plant level that have already been reported by a transfer terminal or storage facility and then transferred to a plant(s). Designate such transfers in Schedule 4 as negative adjustments to stocks at the transfer terminal or storage facility and positive adjustments to stocks at the plant, including appropriate comments. Depending on the required data at transfer terminals or storage sites and associated plants, the energy balance may require an explanatory comment. **ENTER ZERO** in the Ending Stocks column if a plant has no stocks. Do not leave the field blank.

Energy Source: For e-file users, the energy source code is prepopulated. If needed, add an energy source code from the drop-down list. Energy source codes cannot be deleted from Schedule 4. If stocks of a fuel type are no longer held at the plants, contact EIA to remove the fuel code from Schedule 4.

Type of Physical Units: Report coal and petroleum coke in tons and distillate and residual oils in barrels.

1. **End of Month (or year) Stocks:** Report this month's ending stocks. Include all on-site stocks held for eventual use in the electric power plant regardless of actual ownership of the fuel.
2. **Current Month's Purchases:** These data have been reported (above in SCHEDULE 2) and the sum by energy source is automatically populated.
3. **Current Month's Consumption:** These data have been reported (in SCHEDULE 3A and 3B) and the sum by energy source is automatically populated.
4. **Previous Month's Ending Stocks:** This is automatically populated into the schedule from the previous reporting period.

5. **End of Month (or year) Stocks:** Report this month's ending stocks. Include all on-site stocks held for eventual use in the electric power plant regardless of actual ownership of the fuel.

6. **Adjustment to Stocks: WHENEVER THE BALANCE IS NOT ZERO,** an adjustment to end-of-month stocks must be reported to balance the fuel purchased, consumed and stocked. Adjustments may include stocks transferred or sold offsite, stock reconciliations, fuels utilized for other purposes and revisions to previous months' stocks. Adjustments can be positive or negative. An explanation of the nature of the adjustment is REQUIRED in the section provided on Schedule 4.

7. **Balance:** The data balance verifies the quality of the data. The balance is the difference between Reported Ending Stocks (4) and an expected value for ending stocks calculated by the following equation: Previous Month's Ending Stocks plus Current Month's Purchases minus Current Month's Consumption plus (or minus) Adjustment to Stocks [(4) = (1) + (2) - (3) + (5)]. **If the balance is a non-zero value, please review the data entered for fuel stocks, purchases, and consumption for accuracy and if accurate, enters an adjustment amount to balance the fuel. Balance must be ZERO!**

8. **Comment for Adjustments:** Enter a comment for all adjustment values to explain the nature of the adjustment. Examples of adjustments include fuel sold or transferred, fuel not used for the production of electricity, fuel used for other purposes at the plant (e.g. as a feed material to produce chemical byproducts such as fertilizers, reconciliations to estimated stocks, revised values to correct previous stocks data, or diesel used in trucks or other equipment.

9. **Fuel Terminal –Plant Relationships and Fuel Shipments:** Terminals (plants with no generating capacity that serve to distribute fuel to associated power plants) must report the plants that received fuel during the reporting period and the quantity of the fuel transferred to EACH plant. The Plant ID will be preprinted after the initial report is made.

NOTE: Schedule 5 has been combined with Schedules 3A to 3D.

SCHEDULE 6. NONUTILITY ANNUAL SOURCE AND DISPOSITION OF ELECTRICITY

Required Respondents: Nonutility plants (unregulated) must report annual calendar year data for the source and disposition of electricity.

- *If you file the EIA-923 monthly*, this schedule is completed on the Form EIA-923 Supplemental Form and is filed annually.
- *If you file the EIA-923 annually*, this schedule is completed on the Form EIA-923 Annual.

Report all generation in MWh rounded to a whole number.

Source of Electricity

1. **Gross Generation (Annual):** Report the total gross generation from all prime movers at the plant. Note that for monthly respondents this should equal the sum of the gross generation reported each month on Schedules 5A, 5B, and 5C.

2. **Other Incoming Electricity:** Report all incoming electricity to the facility, whether from purchases, tolling agreements, transfers, exchanges, or other arrangements.

3. **List descriptions of "Other Incoming Electricity" (for example, purchased, exchanged).**

4. **Total Sources:** The sum of the total gross electricity generated plus the total incoming electricity is automatically calculated and displayed. The Total Sources must equal Total Disposition (see below).

Disposition of Electricity

5. **Station Use:** Station Use is electricity that is used to operate an electric generating plant, which is the electricity used in the operation and maintenance of the facility (e.g., parasitic loads from auxiliary equipment), regardless of whether the electricity is produced at the plant or comes from another source. Station use does not include any electricity converted and stored at an energy storage plant (such as electricity used for pumping at a hydroelectric pumped-storage plant), nor direct use (see below) of electricity by an industrial or commercial CHP plant.
6. **Direct Use (Industrial and Commercial Sector Plants, both CHP and non-CHP):** Report the amount of electricity generated by the plant and consumed onsite for processes such as manufacturing, district heating/cooling, and uses other than power plant station use. (Plants that cannot separate Station Use and Direct Use may enter zero in Station Use and the sum of Station Use and Direct Use in the Direct Use field. Provide a comment on SCHEDULE 9.)
7. **Total Facility Use:** The sum of station use and direct use is calculated and displayed.
8. **Retail Sales to Ultimate Customers:** Report the amount of electricity sold directly to retail (end-use) customers (power that is not re-sold or distributed by another entity). Include unbilled electricity provided to affiliated and non-affiliated entities, excluding power provided as part of a tolling agreement. By entering a value in this cell, you will be required to file the Form EIA-861 "Annual Electric Power Industry Report," for more detailed information on the nature of the retail sales.
9. **Sales for Resale:** Report the amount of electricity sold for resale (wholesale sales in MWh). If data are entered for this item, you must complete SCHEDULE 7.
10. **Provided under Tolling Agreements:** Report the amount of electricity provided under a tolling agreement.
11. **Other Outgoing Electricity:** Report all other outgoing electricity from the facility, such as tolling agreements, transfers, and exchanges. Specify the nature of Other Outgoing Electricity on Schedule 9, Comments.
12. **List descriptions of "Other Outgoing Electricity" (for example, losses, exchanged, provided without charge).**
13. **Total Disposition:** The sum of station use, direct use, retail sales, sales for resale, and other outgoing electricity is automatically calculated and displayed. Total Disposition must equal Total Sources (see above).

SCHEDULE 7. ANNUAL REVENUES FROM SALES FOR RESALE

Required Respondents: To be completed by respondents who report a positive value on SCHEDULE 6, Disposition of Electricity, Item 8, Retail Sales and/or Item 9, Sales for Resale.

Annual Revenue from Sales for Resale: "Sales for Resale" is energy supplied to other electric utilities, cooperatives, municipalities, Federal and State electric agencies, power marketers, or other entities for resale to end-use consumers. This excludes energy supplied under tolling agreements that is intended for resale to end use customers. Report energy supplied under tolling agreements in "Other Outgoing Electricity." Report all revenue from Sales for Resale in thousand dollars to the nearest whole number.

Annual Retail Sales, Revenue, and Number of Customers: NOTE these data were previously collected on the Form EIA-861U. The 861U is no longer required. Report the retail sales in MWh by State and customer type (residential, commercial, industrial or transportation). Report the associated revenue and the number of customers in each class (number of meters).

SCHEDULE 8. ANNUAL ENVIRONMENTAL INFORMATION

Required Respondents: SCHEDULE 8 is filed annually. Some or all parts of SCHEDULE 8 must be reported by steam-electric (thermoelectric) power plants, including nuclear and combined-cycle plants, with a total steam turbine capacity of 10 megawatts and above. Parts A through F are required for plants 100 MW and above. Only Parts C, E and F are required for plants having at least 10 megawatts but less than 100 MW.

- *If you file the EIA-923 monthly*, this schedule is completed on the Form EIA-923 Supplemental and is filed annually.
- *If you file the EIA-923 annually*, this schedule is completed on the Form EIA-923 Annual.

SCHEDULE 8. PART A. ANNUAL BYPRODUCT DISPOSITION

1. If no byproduct was produced, place a check in the checkbox labeled NO BYPRODUCTS.
2. If a byproduct is disposed of at no cost, enter the quantity of the byproduct under the appropriate column and make a footnote entry on SCHEDULE 9 stating that no money was exchanged for the quantity indicated. If there was a cost for disposal, make sure there is a corresponding entry on SCHEDULE 8, PART B, for collection and/or disposal costs. Costs for gypsum disposal should be reported on SCHEDULE 8, PART B, column 5, under "Disposal," with a footnote entry on SCHEDULE 9. Entries on SCHEDULE 8, PART A, in the Sold column, must be compatible with entries on SCHEDULE 8, PART B, columns 11 through 16, Byproduct Sales Revenue. If the byproduct was distributed in several different ways (for example, the byproduct was placed in a landfill and then later sold), report the end disposition of the byproduct and provide a comment on SCHEDULE 9 explaining all previous dispositions.
3. Do not include byproducts sold under "Used On-Site."
4. **Fly ash from standard boiler/primary particulate collection device (PCD) units** includes those with no flue gas desulfurization (FGD) system or with FGD systems located downstream of the PCD.
5. **Fly ash from units with dry FGD** includes spray dryer or duct injection systems where Fly Ash and FGD byproducts are collected in the same PCD. It does not include Fluidized Bed Combustion (FBC) units.
6. **Fly ash from FBC units** includes fly ash from fluidized bed combustion (FBC) units.
7. **Bottom ash from standard boiler units** includes boiler slag from slagging combustors. It does not include Bottom (Bed) Ash from FBC units or slag from coal gasification units.
8. **Bottom (bed) ash from FBC units** includes bottom (bed) ash from fluidized bed combustion (FBC) units.
9. **FGD Gypsum** is defined as byproducts that are greater than 75 percent $CaSO_4 \bullet 2H_2O$ by weight.
10. **Other FGD byproducts** includes all FGD byproducts not reported in **Fly ash from units with dry FGD units; Fly ash from FBC units; Bottom ash from standard boiler units; Bottom (bed) ash from FBC units;** and **FGD gypsum** along with additives used to stabilize the FGD byproducts.
11. **Ash from coal gasification (IGCC) units** includes slag or solids extracted from the bottom of the gasifier as well as fly ash removed downstream of the gasifier.
12. **Other:** Enter amount of other by-products. Specify the by-product on Schedule 9, Comments.
13. **Steam sales** must be reported in million Btu (MMBtu).

SCHEDULE 8. PART B. FINANCIAL INFORMATION RELATED TO COMBUSTION BYPRODUCTS

1. All entries should be reported in thousand dollars to the nearest whole number.
2. For all **Operation and Maintenance (O&M) Expenditures during Year**, costs should be provided for both collection and disposal of the indicated byproducts. If the collection and disposal costs cannot be separated, place the total cost under **Collection**, and provide a comment on SCHEDULE 9 indicating that the costs cannot be separated. All operation and maintenance expenditures should exclude depreciation expense, cost of electricity consumed, and fuel differential expense (i.e., extra costs of

cleaner, thus more expensive fuel). Include all contract and self-service pollution abatement operation and maintenance expenditures for each line item.

3. For column 1, **Fly Ash**, and column 2**, Bottom Ash**, expenditures cover all material and labor costs including equipment operation and maintenance costs (such as particulate collectors, conveyors, hoppers, etc.) associated with the collection and disposal of the byproducts. Record expenditures for IGCC slag or fly ash collection/disposal in Column (1) or Column (2), respectively.

4. For column 3, **Flue Gas Desulfurization**, expenditures cover all material and labor costs including equipment O&M costs associated with the collection and disposal of the sulfur byproduct.

5. For column 4, **Water Pollution Abatement**, expenditures cover all operation and maintenance costs for material and/or supplies and labor costs including equipment operation and maintenance (pumps, pipes, settling ponds, monitoring equipment, etc.), chemicals, and contracted disposal costs. Collection costs include any expenditure incurred once the water that is used at the plant is drawn from its source. Begin calculating expenditures at the point of the water intake. Disposal costs include any expenditure incurred once the water that is used at the plant is discharged. Begin calculating disposal expenditures at the water outlet (i.e., cooling costs).

6. For column 5, **Other Pollution Abatement**, operation and maintenance expenditures are those not allocated to one particular expenditure (e.g., expenditures to operate an environmental protection office or lab). Include expenses for conducting environmental studies for expansion or reduction of operation. Exclude all expenses for health, safety, employee comfort (OSHA), environmental aesthetics, research and development, taxes, fines, permits, legal fees, Superfund taxes, and contributions. Define other pollution abatement(s) in a comment on SCHEDULE 9.

7. For **Capital Expenditures for New Structures and Equipment during Year, Excluding Land and Interest Expense**, report all pollution abatement capital expenditures for new structures and/or equipment made during the reporting year regardless of the date they may become operational. Columns 7, 8, 9, and 10 should not be left blank. ENTER ZERO if the item is not applicable or an estimate is not available, and enter a comment in SCHEDULE 9. Specify the nature of the expenditures for these items in a comment on SCHEDULE 9.

8. For column 7, **Air Pollution Abatement**, report new structures and/or equipment purchased to reduce, monitor, or eliminate airborne pollutants, including particulate matter (dust, smoke, fly ash, dirt, etc.), sulfur dioxides, nitrogen oxides, carbon monoxide, hydrocarbons, odors, mercury, acid gases and other pollutants. Examples of air pollution abatement structures/equipment include flue gas particulate collectors, FGD units, continuous emissions monitoring equipment (CEMs), and nitrogen oxide control devices. Specify new structures/equipment in a comment on SCHEDULE 9.

9. For column 8, **Water Pollution Abatement**, report new structures and/or equipment purchased to reduce, monitor, or eliminate waterborne pollutants, including chlorine, phosphates, acids, bases, hydrocarbons, sewage, and other pollutants. Examples include structures/equipment used to treat thermal pollution; cooling, boiler, and cooling tower blowdown water; coal pile runoff; and fly ash waste water. Water pollution abatement excludes expenditures for treatment of water prior to use at the plant. Specify new structures/equipment in a comment on SCHEDULE 9.

10. For column 9, **Solid/Contained Waste**, report new structures/equipment purchased to collect and dispose of objectionable solids or contained liquids. Examples include purchases of storage facilities, trucks, etc., to collect, store, and dispose of solid/contained waste. Include equipment used for handling solid/contained waste generated as a result of air and water pollution abatement. Specify new structures/equipment in a comment on SCHEDULE 9.

11. For column 10, **Other Pollution Abatement**, report amortizable expenses and purchases of new structures and or equipment when such purchases are not allocated to a particular unit or item. Examples include charges for the purchases of facilities to control hazardous waste, radiation, and noise pollution. Exclude all equipment purchased for aesthetics purposes. Specify new structures/equipment in a comment on SCHEDULE 9.

12. If **Byproduct Sales Revenue during Year** items are not applicable, ENTER ZERO in Total, column 16, only. Report the revenue, if any, for each listed byproduct. Specify "other" revenue in a comment on SCHEDULE 9. Entries must be compatible with the entries on SCHEDULE 8, PART A, "Sold" column. If the revenue for a byproduct is less than $500, but more than zero dollars, enter a zero and enter a comment on SCHEDULE 9 with the actual dollar amount. Revenue for gypsum should be reported on SCHEDULE 8, PART B, column 14, with a comment on SCHEDULE 9. Report the total revenue for the sale of byproducts in column 16. If the revenue reported was for the sale of stockpiled byproducts from previous years, make a comment on SCHEDULE 9.

SCHEDULE 8. PART C. AIR EMISISONS CONTROL INFORMATION

OPERATIONAL DATA FOR EMISSIONS OF SO2, NOX, PARTICULATES, MERCURY, AND ACID GASES

If a pollutant is uncontrolled, please check the appropriate check box.

Unit ID: The IDs for various equipment, boilers, FGP, FGD, or other units, must match and correspond to the IDs reported on the EIA-860,Schedule 6. The unit IDs and type of equipment are prepopulated for e-file users. If the information is not prepopulated, choose from the drop down list or contact EIA.

Enter multiple lines for units that control more than one type of air emission.

Unit Type: Indicate the type of equipment, for example boiler, FGP, FGD).

Emission Type Controlled: Enter the air emission controlled by this unit. Enter multiple lines for each emission as applicable. Choose codes from the drop down list for SO2, NOX, Hg, HCl, or PM.

Technology Type: Choose from the drop down list of codes for:

Code	Description	Unit Type
BR	Jet Bubbling Reactor	FGD
CD	Circulating Dry Scrubber	FGD
MA	Mechanically Aided Type	FGD
PA	Packed Type	FGD
SD	Spray Dryer Type	FGD
SP	Spray Type	FGD
TR	Tray Type	FGD
VE	Venturi Type	FGD
DP	Dry Powder Injection type	FGD
AA	Advanced Overfire Air	NOX
BF	Biased Firing	NOX
CF	Fluidized Bed Combuster	NOX
FR	Flue Gas Recirculation	NOX
FU	Fuel Reburning	NOX
H20	Water Injection	NOX
LA	Low Excess Air	NOX
LN	Low NOX Burner	NOX
NH3	Ammonia Injection	NOX
OV	Overfire Air	NOX
OZ	Operating during the Ozone Season	NOX
SC	Slagging	NOX
SN	Selective Noncatalytic Reduction	NOX

SR	Selective Catalytic Reduction	NOX
STM	Steam Injection	NOX
BS	Baghouse, shake and deflate	FGP
BP	Baghouse, pulse	FGP
BR	Baghouse, reverse air	FGP
EC	Electrostatic Precipitator, cold side, With fgc	FGP
EH	Electrostatic Precipitator, hot side, With fgc	FGP
EK	Electrostatic Precipitator, cold side, Without fgc	FGP
MC	Multiple Cyclone	FGP
WS	Wet Scrubber	FGP
EW	Electrostatic Precipitator, hot side, Without fgc	FGP
SC	Single Cyclone	FGP

Hours in Service: Enter the total hours the control was in service during the reporting period (to the nearest hour).

Complete the rate/efficiency and other information as applicable to each equipment type and emission controlled. Leave non-applicable cells blank.

Typical Particulate Matter Emissions Rate: Enter the average emission rate for particulate matter based on the annual operating factor (to nearest 0.01 pound per million Btu).

Nox Emission Rate (Annual): Enter the actual , nitrogen oxide emission rate, in pounds per million Btu of the fuel, based on data from the continuous emission monitoring system (CEMS) where possible. If NOx controls are present, report the the actual controlled emission rate. If uncontrolled, report the actual uncontrolled emission rate. Where CEMS data are not available, report the nitrogen oxide emission rate based on the method used to report emissions data to environmental authorities.

Nox Emisison Rate (May to September): Enter the actual , nitrogen oxide emission rate, in pounds per million Btu of the fuel, based on data from CEMS where possible. If NOx controls are present, report the the actual controlled emission rate. If uncontrolled, report the actual uncontrolled emission rate. Where CEMS data are not available, report nitrogen oxide rates based on the method used to report emissions data to environmental authorities. The summer emission rate may be assumed to be equivalent to the annual emission rate where identical nitrogen oxide controls are used year round.

FGD or FGP Efficiency Rate at Annual Operation Factor: Enter removal efficiency based on the annual operating factor. Annual operating factor is defined as annual fuel consumption divided by the product of design firing rate and hours of operation per year. If actual data are unavailable, provide estimates based on equipment design performance specifications.

FGD or FGP Tested Efficiency Rate (at 100% Load): Enter the tested efficiency of the FGD and/or FGP unit for each controlled pollutant. If not tested at 100% load provide the load at which the test was conducted in a comment on SCHEDULE 9. If no test has been conducted leave field blank and provide a comment.

Test Date: Enter the date of the latest efficiency test for the FGD and/or FGP unit for each controlled pollutant. If no test was conducted, leave the test date blank.

Quantity of FGD Sorbent Used: Enter the quantity of FGD sorbent used during the reporting period (to the nearest 0.1 thousand tons).

Electrical Energy Consumption: Enter the Electrical Energy Consumed by the FGD Unit during the reporting period (in megawatthours).

Mercury Removal Efficiency: Enter the removal efficiency for mercury emissions.

HCl Removal Efficiency: Enter the removal efficiency for acid gas emissions, such as HCl.

Operation and Maintenance Expenditures during the Year: Report the O&M Expenditures for the Flue Gas Desulfurization Units, excluding electricity, in thousand dollars.

SCHEDULE 8. PART D. MONTHLY COOLING SYSTEM OPERATIONS

NOTE: All steam-electric plants of 100 MW nameplate capacity or greater, including combined-cycle and nuclear energy plants, must respond to this schedule. **A separate page must be completed for each month.**

1. If actual data are not available, provide an estimated value.

2. If the source of cooling water is a well or municipal water system, do not complete the Cooling Water Temperature sections.

3. **Cooling System ID:** The cooling system ID must match and correspond to the data reported on the EIA-860. The ID is prepopulated for e-file users. If the ID is not prepopulated, choose the ID from the drop down list. If the cooling system ID is not on the list, contact EIA to have new IDs added. If the data to be reported are for the entire plant (because the data cannot be broken down by separate cooling systems), choose "PLANT" from the drop-down list.

4. **Cooling System Type:** Use codes from the drop down list to provide the type of cooling system (once through, recirculating, hybrid). The Cooling System type is prepopulated from the data reported on the Form EIA-860.

5. **Hours in Service:** Enter the hours the intake pumps operated for the cooling system for each month. Intake can be for Withdrawal or Diversion from a natural body of water.

5. **Monthly Amount of Chlorine Added to Cooling Water:** Report amount of elemental chlorine. If a compound is used, determine the amount of chlorine in the compound. Report amount of chlorine to the nearest 0.001 thousand pounds.

6. **Average Monthly Rate of Cooling Water**: Report the rate of flow in cubic feet per second (to the nearest 0.1 ft^3). If using alternative units, provide the unit of measurement.

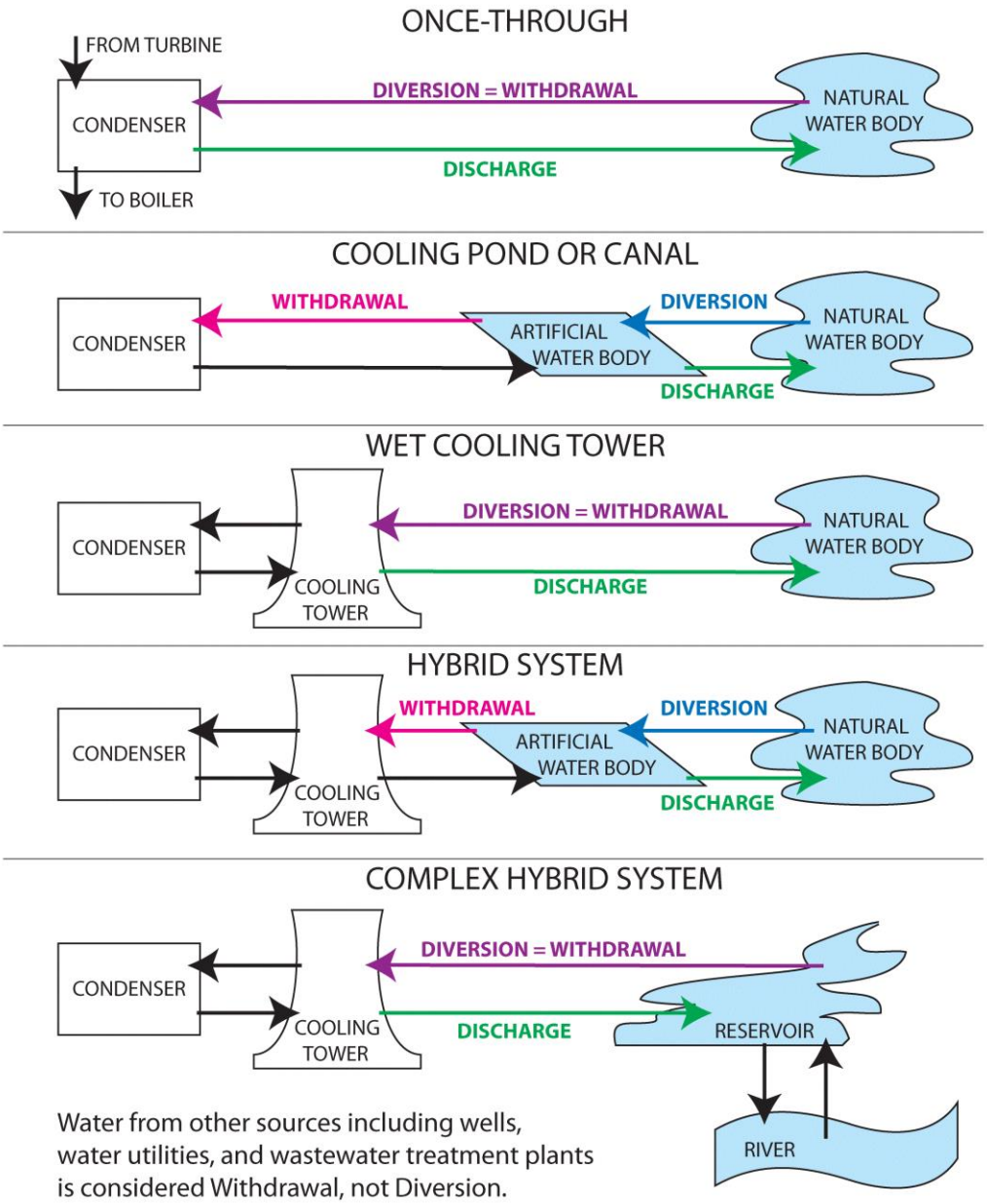
Diversion is the water moved from a watercourse without immediate beneficial use, for purposes such as filling a cooling pond or adding water to a lake from which thermoelectric power water withdrawals can occur. Diversion and Withdrawal can be the same thing in some types of systems. If this is the case, report only Withdrawal and leave Diversion blank.

Withdrawal is the water removed from a water body for beneficial use such as cooling water, boiler make-up water, ash sluicing, and dust suppression.

Discharge is the water returned to a water body (not a cooling pond), not necessarily the same water body as the withdrawal. For zero discharge system types (recirculating systems) report zero in the discharge field. Do not report the water discharged back into the cooling pond for recirculation.

Consumption is the water that is withdrawn from a water body and not returned (discharged), because of evaporation losses and onsite consumption such as for dust control and flue gas desulfurization.

The following figure is provided to clarify cooling terms and configurations.



Water from other sources including wells, water utilities, and wastewater treatment plants is considered Withdrawal, not Diversion.

Blowdown from cooling systems which is diverted to ash systems or evaporation ponds is not considered Discharge.

7. For Measured or Estimated, if all data reported under the Average Monthly Rate of Cooling Water section have been measured, choose one of the choices for "Measured" from the drop-down list. If one or more entries have been estimated in a particular section choose one of the estimation methodologies given in the drop-down list for that section. If "Other" is chosen, provide details of the estimation method on Schedule 9. The choices that will be included in the drop-down list are the following:

    - Measured using a streamflow gage or weir
    - Measured using a cumulative or continuous flowmeter
    - Measured using an instantaneous flowmeter and pump running time
    - Estimated based on stated pump capacity and pump running time
    - Estimated based on another flow, such as discharge estimated from measured withdrawals
    - Consumption calculated as the difference of withdrawal and discharge flows
    - Consumption estimated from withdrawal amount and a loss coefficient
    - Estimated based on power generation
    - Estimated based on plant design characteristics
    - Permitted value, not measured
    - Other (describe in footnote)

8. **Cooling Water Temperature:** Report the Average Monthly Temperature and the Maximum Temperature for the Month in degrees Fahrenheit to the nearest whole number, measured at the withdrawal point from the natural body of water or cooling pond in the case where water is first diverted and at the discharge point into the natural body of water.

9. **Method of Measurement:** If all data reported under the Cooling Water Temperature section have been measured, choose one of the choices for "Measured" from the drop-down list. If one or more entries have been estimated in a particular section choose one of the estimation methodologies given in the drop-down list for that section. If "Other" is chosen, provide details of the estimation method on Schedule 9. The choices that will be included in the drop-down list are the following:

    - Measured continuously with a thermometer
    - Measured at intervals (for example, daily) with a thermometer
    - Discharge temperature calculated based on intake temperature
    - Intake temperature calculated based on discharge temperature
    - Estimated based on plant design characteristics
    - Permitted value, not measured
    - Other (describe in footnote)

10. **Volume of Cooling Water (million gallons/month):** Report the actual volume of water diverted, withdrawn, consumed and discharged for each cooling system ID or for the PLANT in gallons per month. If an alternative unit of measurement is used, provide the unit in the Unit of Measurement field.

SCHEDULE 9. COMMENTS

This schedule provides space for comments. Please identify schedule, item, and identifying information (e.g., plant code, boiler ID, generator ID, prime mover) for each comment. If plant is sold, provide purchaser's name, a telephone number (if available), and date of sale.

Table 7

Prime Mover Code	Prime Mover Description
BA	Energy Storage, Battery
BT	Turbines Used in a Binary Cycle (including those used for geothermal applications)
CA	Combined-Cycle – Steam Part
CE	Energy Storage, Compressed Air
CP	Energy Storage, Concentrated Solar Power
CS	Combined-Cycle Single-Shaft Combustion turbine and steam turbine share a single generator
CT	Combined-Cycle Combustion Turbine Part
ES	Energy Storage, Other (Specify on Schedule 9, Comments)
FC	Fuel Cell
GT	Combustion (Gas) Turbine (including jet engine design)
HA	Hydrokinetic, Axial Flow Turbine
HB	Hydrokinetic, Wave Buoy
HK	Hydrokinetic, Other
HY	Hydraulic Turbine (including turbines associated with delivery of water by pipeline)
IC	Internal Combustion (diesel, piston, reciprocating) Engine
OT	Other – Specify on SCHEDULE 9.
PS	Energy Storage, Hydraulic Turbine – Reversible (Pumped Storage)
PV	Photovoltaic
ST	Steam Turbine (including nuclear, geothermal and solar steam, excluding combined-cycle)
WT	Wind Turbine, Onshore
WS	Wind Turbine, Offshore

Table 8

	Energy Source Code	Unit Label	"Higher Heating Value" Range		Energy Source Description
			MMBtu Lower	MMBtu Upper	
Fossil Fuels					
Coal	ANT	tons	22	28	Anthracite Coal
	BIT	tons	20	29	Bituminous Coal
	LIG	tons	10	14.5	Lignite Coal
	SUB	tons	15	20	Subbituminous Coal
	WC	tons	6.5	16	Waste/Other Coal (including anthracite culm, bituminous gob, fine coal, lignite waste, waste coal)
	RC	tons	20	29	Refined Coal (A coal product that is created when impurities and/or moisture are removed to improve heat content and reduce emissions. Includes any coal which meets the IRS definition of refined coal (Notice 2010-54 or any superseding IRS notices). Does not include coal processed by coal preparation plants.)
	SGC	Mcf	0.2	0.3	Coal-Derived Synthesis Gas
	CBL	Tons	10	29	Blended Coal. Use ONLY on Schedule 3 for consumption of coal where the above types are blended and an allocation by coal rank cannot be determined.
Petroleum Products	DFO	barrels	5.5	6.2	Distillate Fuel Oil (including diesel, No. 1, No. 2, and No. 4 fuel oils.
	JF	barrels	5	6	Jet Fuel
	KER	barrels	5.6	6.1	Kerosene
	PC	tons	24	30	Petroleum Coke
	RFO	barrels	5.8	6.8	Residual Fuel Oil (including No. 5 and No. 6 fuel oils, and bunker C fuel oil.
	PG	Mcf	2.5	2.75	Propane, gaseous
	SGP	Mcf	0.2	1.1	Petroelum Coke Derived Synthesis Gas
	WO	barrels	3.0	5.8	Waste/Other Oil (including crude oil, liquid butane, liquid propane, naphtha, oil waste, re-refined motor oil, sludge oil, tar oil, or other petroleum-based liquid wastes)
Natural Gas and Other Gases	BFG	Mcf	0.07	0.12	Blast Furnace Gas
	NG	Mcf	0.8	1.1	Natural Gas
	OG	Mcf	0.32	3.3	Other Gas (specify in Comment Section of SCHEDULE 9)
Renewable Fuels					
Solid Renewable Fuels	AB	tons	7	18	Agricultural By-Products
	MSW	tons	9	12	Municipal Solid Waste

	Energy Source Code	Unit Label	"Higher Heating Value" Range		Energy Source Description
			MMBtu Lower	MMBtu Upper	
Renewable Fuels (cont.)					
Liquid Renewable (Biomass) Fuels	OBL	barrels	3.5	4	Other Biomass Liquids (specify in Comment Section of SCHEDULE 9)
	SLW	tons	10	16	Sludge Waste
	BLQ	tons	10	14	Black Liquor
	WDL	barrels	8	14	Wood Waste Liquids excluding Black Liquor (includes red liquor, sludge wood, spent sulfite liquor, and other wood-based liquids)
Gaseous Renewable (Biomass) Fuels	LFG	Mcf	0.3	0.6	Landfill Gas
	OBG	Mcf	0.36	1.6	Other Biomass Gas (includes digester gas, methane, and other biomass gasses) (specify in Comment Section of SCHEDULE 9)
All Other Renewable Fuels	SUN	N/A	0	0	Solar
	WND	N/A	0	0	Wind
	GEO	N/A	0	0	Geothermal
	WAT	N/A	0	0	Water at a **Conventional** Hydroelectric Turbine, and water used in Wave Buoy Hydrokinetic Technology, Current Hydrokinetic Technology, and Tidal Hydrokinetic Technology.
All Other Fuels					
All Other Fuels	WAT	MWh	0	0	Pumping Energy for Reversible (Pumped Storage) Hydroelectric Turbine
	N/A	MWh	0	0	Compressed Air
	NUC	N/A	0	0	Nuclear Uranium, Plutonium, Thorium
	PUR	N/A	0	0	Purchased Steam
	WH	N/A	0	0	Waste heat not directly attributed to a fuel source (WH should only be reported where the fuel source for the waste heat is undetermined, and for combined-cycle steam turbines that do not have supplemental firing.)
	TDF	tons	16	32	Tire-derived Fuels
	OTH	N/A	0	0	Specify in Comment Section of SCHEDULE 9.

GLOSSARY	**The glossary for this form is available online at the following URL:** http://www.eia.gov/glossary/index.html
SANCTIONS	The timely submission of Form EIA-923 by those required to report is mandatory under Section 13(b) of the Federal Energy Administration Act of 1974 (FEAA) (Public Law 93-275), as amended. Failure to respond may result in a penalty of not more than $2,750 per day for each civil violation, or a fine of not more than $5,000 per day for each criminal violation. The government may bring a civil action to prohibit reporting violations, which may result in a temporary restraining order or a preliminary or permanent injunction without bond. In such civil action, the court may also issue mandatory injunctions commanding any person to comply with these reporting requirements. Title 18 U.S.C. 1001 makes it a criminal offense for any person knowingly and willingly to make to any Agency or Department of the United States any false, fictitious, or fraudulent statements as to any matter within its jurisdiction.
REPORTING BURDEN	Public reporting burden for this collection of information is estimated to average 2.0 hours per response for monthly respondents, 3.2 hours per response for annual respondents, and 4.4 hours per response for annual respondents with boiler level data, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The weighted average burden for the Form EIA-923 is 2.3 hours per response. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Energy Information Administration, Office of Survey Development and Statistical Integration, EI-21 Forrestal Building, 1000 Independence Avenue SW, Washington, D.C. 20585-0670; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503. A person is not required to respond to the collection of information unless the form displays a valid OMB number.

DISCLOSURE OF INFORMATION

The following information reported on this survey will be protected and not disclosed to the extent that it satisfies the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C. §552, the Department of Energy (DOE) regulations, 10 C.F.R. §1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C. §1905:

- All information associated with the "Survey Contact" and the "Supervisor of Contact Person for Survey" on SCHEDULE 1
- The "Total Delivered Cost" of coal, natural gas, and petroleum received at nonutility power plants and "Commodity Cost" information for all plants in SCHEDULE 2
- "Previous Month's Ending Stocks" and "Stocks at End of Reporting Period" information reported on SCHEDULE 4

All other information reported on Form EIA-923 is considered public information and may be publicly released in company identifiable form.

The Federal Energy Administration Act requires the EIA to provide company-specific data to other Federal agencies when requested for official use. The information reported on this form may also be made available, upon request, to another component of the Department of Energy (DOE), to any Committee of Congress, the Government Accountability Office, or other Federal agencies authorized by law to receive such information. A court of competent jurisdiction may obtain this information in response to an order. The information may be used for any non-statistical purposes such as administrative, regulatory, law enforcement, or adjudicatory purposes.

Disclosure limitation procedures are not applied to the statistical data published based on the EIA-923 survey information. There may be some statistics that are based on data from fewer than three respondents, or that are dominated by data from one or two large respondents. In these cases, it may be possible for a knowledgeable person to closely estimate the information reported by a specific respondent.